



STAIR STRINGER GUIDE

1½" Versa-Lam® 2400 & 2650 1.8E



Boise Cascade Engineered Wood Products build better homes with stronger, stiffer floors using only wood purchased in compliance with a number of green building programs. Take a moment to view our sustainability certification site at <http://www.bc.com/sustainability/certification.html> or view our green brochure at http://www.bc.com/wood/ewp/Boise_EWP_Green.html.

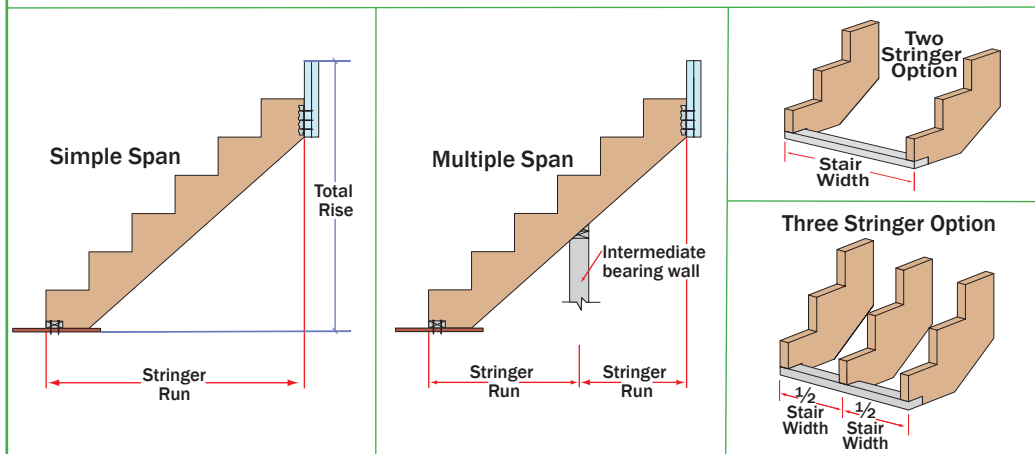
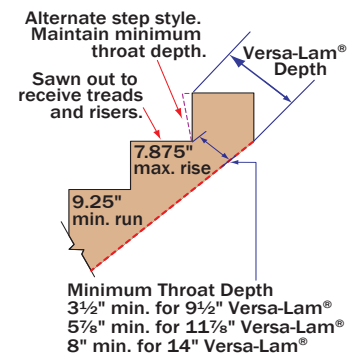
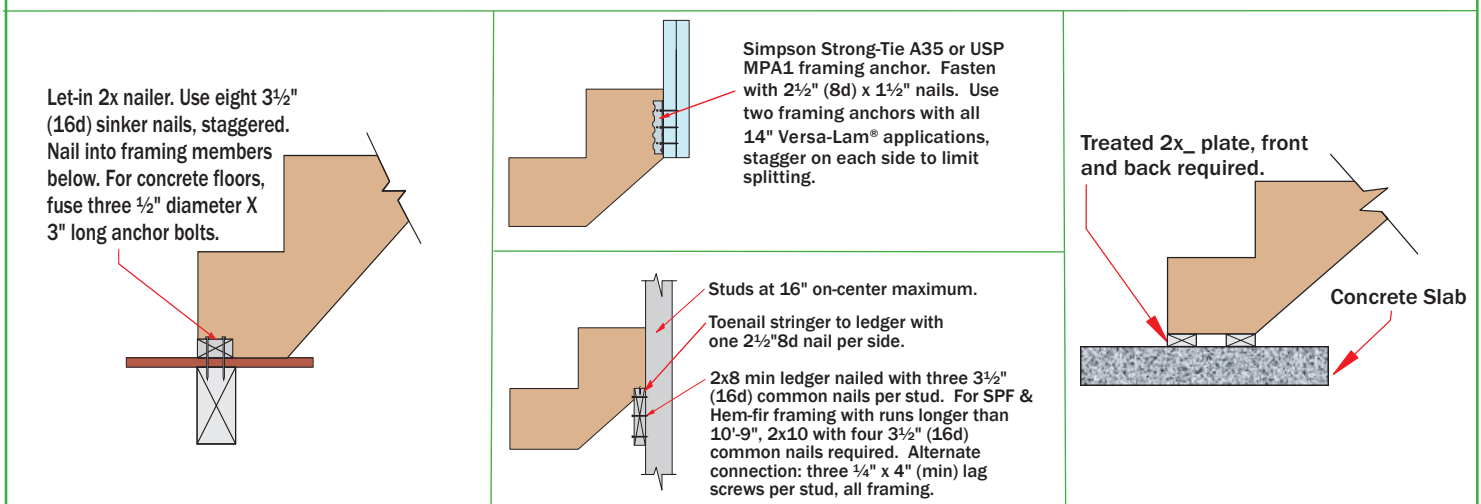
Boise Cascade Engineered Wood Products are available as PEFC® Chain-of-Custody certified, SFI® Chain-of-Custody certified and SFI Fiber-Sourcing certified, as well as NAHB Research Center Green Approved, enabling homebuilders to also obtain green building points through the National Green Building Standard.

1½" Versa-Lam® 2400 & 2650 1.8E Allowable Stair Stringer Spans - Limit States Design

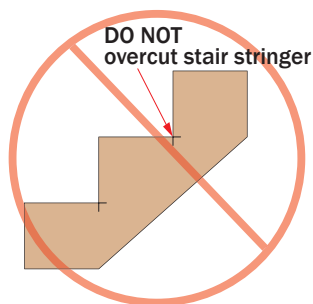
Material Depth	36" Tread Width				42" Tread Width		44" Tread Width		48" Tread Width	
	2 Stringers		3 Stringers		3 Stringers		3 Stringers		3 Stringers	
	Stringer Run	Total Rise	Stringer Run	Total Rise	Stringer Run	Total Rise	Stringer Run	Total Rise	Stringer Run	Total Rise
40 PSF Live Load / 15 PSF Dead Load										
9½"	6'-1"	5'-10"	6'-11"	6'-7"	6'-7"	6'-3"	6'-6"	6'-2"	6'-3"	6'-0"
11⅞"	10'-2"	9'-4"	11'-8"	10'-7"	11'-1"	10'-1"	10'-11"	9'-11"	10'-7"	9'-8"
14"	13'-10"	12'-5"	15'-11"	14'-2"	15'-1"	13'-6"	14'-10"	13'-3"	14'-5"	12'-11"
100 PSF Live Load / 15 PSF Dead Load										
9½"	4'-5"	4'-5"	5'-1"	5'-0"	4'-10"	4'-9"	4'-9"	4'-8"	4'-7"	4'-7"
11⅞"	7'-6"	7'-0"	8'-7"	7'-11"	8'-2"	7'-7"	8'-0"	7'-6"	7'-9"	7'-3"
14"	10'-2"	9'-4"	11'-8"	10'-7"	11'-1"	10'-1"	10'-11"	9'-11"	10'-7"	9'-8"

SPAN/LOADING NOTES

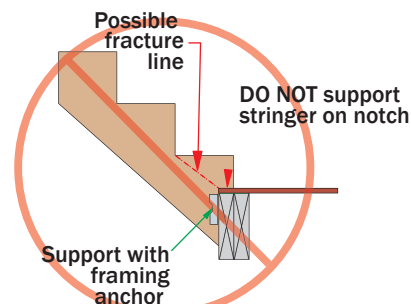
- Deflection limited to L/360 live load & L/240 total load.
- Spans based upon stair limits of 7.875" max. rise and 9.25" min. run
- Contact Boise Cascade EWP Engineering for design assistance on other stair stringer applications and/or loading.
- Consult governing building code and/or local building official for proper live load per application.
- Building codes typically restrict stair widths to 44" or greater for stairways serving an occupant load greater than 50 people.
- Maximum total rise between floors is 12'-0" per building codes.

SPAN TABLE DETAILS**ALLOWABLE CUT DIMENSIONS****CONNECTION DETAILS - For 40 PSF Live Load Applications Only** (Consult design professional of record for connections of 100 PSF applications.)

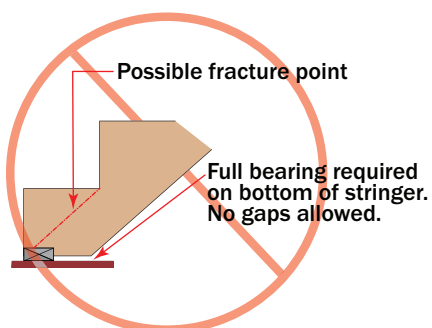
DO NOT overcut stair stringer



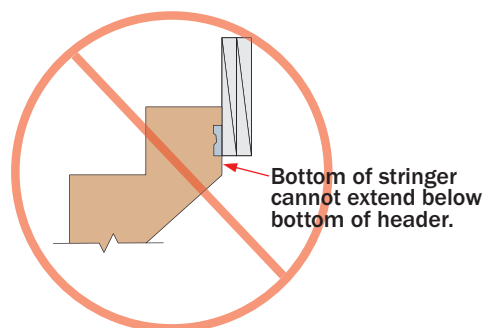
DO NOT support stringer on notch detail



DO NOT support stringer on let-in nailer only



DO NOT use shallow header depths



CONSTRUCTION NOTES

- Stair stringers are extremely unstable, use caution when installing treads.
- Use subfloor adhesive on all contact surfaces to minimize squeaks.
- Adequate moisture barrier required between stringers and concrete.
- Keep product as dry as possible during construction.
- All wood splits when significant stress is induced across the grain - DO NOT apply significant side impact load (e.g., hammer) to remaining triangle sections of stringers.
- When installing treated wood, use only connectors/fasteners that are approved for use with the corresponding wood treatment.
- Use fasteners no larger than 2½" (8d) box nail or 2½" (8d) wood screw for attaching standard treads, space no closer than 3" on-center.

Design Properties⁽¹⁾ - Limit States Design

Products 1½" Versa-Lam®	Modulus of Elasticity True E [psi]	Specified Bending Strength F _b [psi]	Specified Shear Strength F _v [psi]	Specified Compression Parallel to Grain F _c [psi]	Specified Compression Perpendicular to Grain F _c [psi]
2400 1.8E	1,800,000	4800 ⁽²⁾	580	4400	1525
2650 1.8E	1,800,000	5280 ⁽²⁾	580	4400	1525

1) Design Values as per CCMC 12472-R

2) Multiply by depth factor: (12/d)^{1/9}

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Quality and Performance**

Boise Cascade warrants its BCI® Joist, Versa-Lam®, and ALLJOIST® products to comply with our specifications, to be free from defects in material and workmanship, and to meet or exceed our performance specifications for the-normal and expected life of the structure when correctly stored, installed-and used according to our Installation Guide.

For information about Boise Cascade's engineered wood products,
including sales terms and conditions, warranties and disclaimers,

visit our website at www.BCewp.com

email us at EWP_Canada@bc.com or call us at 800 232-0788